REMARKS

Applicants appreciate the notification of allowable subject matter, i.e., that claims 11-16 are allowed, and claims 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Claims 1-16 and 28-36 are pending in the application. Claim 1 has been amended, and new claims 28-36 have been added by the present amendment. Claims 17-27 have been canceled without prejudice. The amendments are fully supported by the specification as originally filed.

New claim 28 incorporates the subject matter of claims 1 and 6, indicated as being allowable in the Office Action. New claim 31 incorporates the allowable subject matter of claims 1 and 7. New claim 35 incorporates the allowable subject matter of claims 1 and 9. Therefore, claims 11-16 and 28-36 incorporate subject matter that was either allowed or deemed allowable in the Office Action.

Claim 1, as amended, recites a permanent magnet motor assembly including: a stator having a thermally-conductive stator plate; a rotor having an end proximate the stator plate; a magnet positioned along a length of the rotor; and a shield covering the proximal end of the magnet to reduce flux leakage between the magnet and the stator plate.

As shown in FIG. 1, a shield 30 covers the proximal end of one or more magnets 20, thereby preventing stray flux lines from impacting the stator, in particular stator plate 14 (see page 8, lines 1-4 of specification). The stator plate 14 is made of a thermally-conductive material such as aluminum (see page 7, lines 20-21), which allows the stator plate 14 to carry out its function of conducting heat from the coil 18 during rotation of the rotor 10. As recited in claim 1, the stator plate 14 is shielded by the shield 30, thereby reducing magnetic field leakage between the magnets 20 and the stator plate 14.

Claims 1 and 5 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent 6,320,288 to Suzuki et al. (hereinafter "Suzuki"). Claims 2-4 were rejected under 35 USC §103(a) as being unpatentable over Suzuki in view of U.S. Patent 6,369,483 to Hill. These rejections are respectfully traversed.

As an initial matter, it should be pointed out that the Suzuki reference cannot be used in any rejection(s) of the claims under 35 USC 102(b)/103(a). The present application was filed on July 27, 2001. The Suzuki reference was patented on November 20, 2001, which is not "more than one year prior to the date of the application for patent in the United States," as required by 35 USC 102(b).

Suzuki fails to teach or suggest a stator having a thermally-conductive stator plate, or a shield that covers the proximal end of a magnet, i.e., the end positioned near the stator.

With reference to FIGS. 1 and 2 of Suzuki, as cited in the Office Action, a magnetic shield ring 30 is mounted on the outer side of a rotary magnetic pole 9 (hereinafter "magnet," see column 2, lines 58-60). A stator magnetic pole 21, stator windings 22, and a stator frame 23 made of a "synthetic resin material" (column 3, lines 15-16) are positioned radially inside the magnet 9.

Suzuki fails to teach or suggest a thermally-conductive stator plate, as recited in claim 1 of the Applicants' invention. In Suzuki, the stator frame 23 is positioned within the useful magnetic field generated by the magnet 9, but is not thermally conductive. Because the stator frame is made of a "synthetic resin material" which is thermally insulative, it is not desirable or necessary to shield the stator frame 23.

The magnetic shield ring 30 of Suzuki does not cover the proximal end of the magnet 9. The "proximal end" of magnet 9 refers to the end positioned near the stator 21/22/23, as defined in the specification and recited in claim 1. However, in Suzuki, the magnetic shield ring 30 shields the outer end of the magnet 9, not the proximal end nearest the stator frame 23 (see FIG. 1). As the stator frame 23 is positioned within the magnetic field generated by the magnet 9, the stator frame 23 is subjected

to the magnetic field generated by the magnet 9. In Suzuki, the stator frame 23 is not shielded from this magnetic field, as required in the Applicants' claimed invention. Moreover, the stator frame 23 does not conduct heat, and thus has a different structure and function than the thermally-conductive stator plate recited in claim 1.

For at least the reasons described above, Suzuki does not anticipate or otherwise render obvious the Applicants' claimed invention. Therefore, Suzuki cannot be combined with Hill or any other reference to render obvious the Applicants' claimed invention as recited in claims 2-4.

It is believed that the claims are now in condition for allowance. However, if there are any outstanding issues, the Examiner is urged to call the Applicants' representative at the telephone number listed below.

Applicants believe that additional fees are not required for consideration of the within response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,
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APPENDIX A:
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 1 has been amended as follows:

1. (Amended) A permanent magnet motor assembly, comprising:

a stator having a thermally-conductive stator plate;

a rotor having an end proximate the stator plate, the rotor rotating about an axis;

a magnet positioned along a length of the rotor and having a proximal end positioned near the stator; and

a shield covering the proximal end of the magnet to reduce magnetic field leakage between the proximal end of the magnet and the stator plate.

Claims 17-27 have been canceled without prejudice.

The following new claims have been added:

28. (New) A permanent magnet motor assembly, comprising:

a stator;

a rotor having an end proximate the stator, the rotor rotating about an axis;

a magnet positioned along a length of the rotor and having a proximal end positioned near the stator; and

a shield covering the proximal end of the magnet to reduce magnetic field leakage between the proximal end of the magnet and the stator, wherein the shield comprises a cup extending around the proximal end of the magnet and against the rotor.

29. (New) The permanent magnet motor assembly of claim 28, wherein the rotor includes a first rotor section and a second rotor section, the first rotor section being positioned radially inside the second rotor section relative to the axis.

30. (New) The permanent magnet motor assembly of claim 29, wherein the magnet is attached to the second rotor section.

31. (New) A permanent magnet motor assembly, comprising:

a stator;

a rotor having an end proximate the stator, the rotor rotating about an axis;

a magnet positioned along a length of the rotor and having a proximal end positioned near the stator; and

a shield covering the proximal end of the magnet to reduce magnetic field leakage between the proximal end of the magnet and the stator, wherein the shield comprises a snap-fit ring.

32. (New) The permanent magnet motor assembly of claim 31, wherein the snap-fit ring is made of spring steel.

33. (New) The permanent magnet motor assembly of claim 31, wherein the rotor includes a first rotor section and a second rotor section, the first rotor section being positioned radially inside the second rotor section relative to the axis.

34. (New) The permanent magnet motor assembly of claim 33, wherein the magnet is attached to the second rotor section.

35. (New) A permanent magnet motor assembly, comprising:

a stator;

a rotor having an end proximate the stator, the rotor rotating about an axis, wherein the rotor includes a first rotor section and a second rotor section, the first rotor section being positioned radially inside the second rotor section relative to the axis;

a magnet positioned along a length of the rotor and having a proximal end positioned near the stator; and

a shield covering the proximal end of the magnet to reduce magnetic field leakage between the proximal end of the magnet and the stator.

36. (New) The permanent magnet motor assembly of claim 35, wherein the magnet is attached to the second rotor section.